

WHAT IS CLAIMED IS:

1. An ink jet head comprising a nozzle member on which surface a water repellent thin film, containing therein a molecule in which fluoroalkyl chains are bonded to or
5 dispersed in silicon oxide, has been formed.

2. The ink jet head as in claim 1, wherein said water repellent thin film is formed, having a thickness of from 10 nm to 1000 nm.

3. The ink jet head as in either claim 1 or claim 2,
10 wherein said water repellent thin film is formed such that the density of said fluoroalkyl chain-containing molecule at the side of an upper surface of said water repellent thin film is thicker than that at the side of an interface between said water repellent thin film and said nozzle member.

15 4. A method of manufacturing an ink jet head having a nozzle member on which surface a water repellent thin film has been formed, said method comprising the steps of:

applying, onto a surface of said nozzle member, a coat liquid in which a methoxysilane or ethoxysilane compound
20 which is a precursor of silicon oxide and an ethoxysilane or methoxysilane compound which contains therein a carbon fluoride chain are dissolved; and

thereafter, drying said nozzle member.

5. A method of manufacturing an ink jet head having a nozzle member on which surface a water repellent thin film has been formed, said method comprising the steps of:

applying, onto a surface of said nozzle member, a first
5 coat liquid in which a methoxysilane or ethoxysilane compound which is a precursor of silicon oxide is dissolved;

applying, onto said nozzle member surface coated with said first coat liquid, a second coat liquid in which a methoxysilane or ethoxysilane compound which is a precursor
10 of silicon oxide and an ethoxysilane or methoxysilane compound which contains therein a carbon fluoride chain are dissolved; and

thereafter, drying said nozzle member.

6. A method of manufacturing an ink jet head having a
15 nozzle member on which surface a water repellent thin film has been formed, said method comprising the steps of:

applying, onto a surface of said nozzle member, a coat liquid in which a methoxysilane or ethoxysilane compound which is a precursor of silicon oxide and an ethoxysilane or
20 methoxysilane compound which contains therein a carbon fluoride chain are dissolved;

thereafter, drying said nozzle member; and

thereafter, forming a nozzle orifice in said nozzle member.

7. A method of manufacturing an ink jet head having a nozzle member on which surface a water repellent thin film has been formed, said method comprising the steps of:

5 applying, onto a surface of said nozzle member, a first coat liquid in which a methoxysilane or ethoxysilane compound which is a precursor of silicon oxide is dissolved;

10 applying, onto said nozzle member surface coated with said first coat liquid, a second coat liquid in which a methoxysilane or ethoxysilane compound which is a precursor of silicon oxide and an ethoxysilane or methoxysilane compound which contains therein a carbon fluoride chain are dissolved;

 thereafter, drying said nozzle member; and

15 thereafter, forming a nozzle orifice in said nozzle member.

8. The method of manufacturing an ink jet head as in either claim 6 or claim 7, wherein said nozzle orifice forming step is a step of forming nozzle orifices by electrical discharge machining.

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